IN THE CLAIMS:

1. (currently amended) A method of converting test vectors in an original cycle based test language into a target cycle based test language, comprising the following steps of:

reading available waveforms defined in the target test language and forming a set of templates depicting the waveforms where each template corresponds to a waveform of the target test language and includes data showing at least a starting value of a segment of waveform and a number of subsequent edges in the waveform;

reading the test vectors of the original test language and decomposing a waveform in the test vectors in the original test language into a set of constituent events where each event includes data showing at least a starting value and a number of subsequent edges of the waveform;

comparing the template derived from the waveform in the target test language and the set of constituent events derived from the original test language;

storing the waveform data in the target test language when a match is detected in the comparison step and retrieving corresponding parameters of the waveform in the test vectors of original test language and storing the parameters in combination with the matched waveform data;

repeating the above steps for all of the test waveforms in the original test language, thereby forming representation of the waveforms in the target test language;

wherein the step of comparing the template and the constituent event is made at different levels of abstraction determined in advance, in the order of a signal level, a wavekind level where the signal is configured by a plurality of wavekinds, and a character level where the wavekind is configured by a plurality of characters.

2. (canceled)

3. (currently amended) A method of converting test vectors as defined in Claim 1, wherein the set of constituent events is stored in a table format having columns assigned to the data showing the number of subsequent edges and the starting value.

4. (currently amended) A method of converting test vectors as defined in Claim 3, wherein the table storing the set of constituent events is optimized by studying the starting value of a particular event based on an ending state produced by the previous event, thereby simplifying the data in the table.

5. (currently amended) A method of converting test vectors as defined in Claim 1, wherein the test vectors includes drive signals to be supplied to a device under test (DUT) as an input and strobe signals to sample an output of DUT for evaluation, wherein the drive signals in the original test language are converted to the target test language by comparing the template and the set of

constituent events for detecting the match while the strobe signals in the original test language are directly translated to the target test language.

6. (original) A method of converting test vectors as defined in Claim 1, wherein the waveforms in the original test language are assigned where required by resource limitations to a plurality of subcycles of the target test language where the plurality of subcycles are created by multiplexing a test cycle clock in a test system which is operated by the target test language.

7. (original) A method of converting test vectors as defined in Claim 1, wherein the waveforms in the original test language are assigned to a plurality of test channels of the target test language where the plurality of test channels are multiplexed to be connected to a single pin of DUT in a manner configured by a test system which is operated by the target test language.

8. (currently amended) A method of converting test vectors in a STIL (Standard Test Interface Language) into a target cycle based test language, comprising the following steps of:

reading available waveforms defined in the target test language and forming a set of templates depicting the waveforms where each template corresponds to a waveform of the target test language and includes data showing at least a starting value of a segment of waveform and a number of subsequent edges in the waveform;

reading the test waveforms of the STIL format and decomposing a waveform in the test vectors in the STIL format into a set of constituent events where each constituent event includes data showing at least a starting value and a number of subsequent edges of the waveform;

comparing the template derived from the waveform in the target test language and the set of constituent events derived from the waveform in STIL;

storing the waveform data in the target test language when a match is detected in the comparison step and retrieving corresponding parameters of the waveform in the test vectors of STIL and storing the parameters in combination with the matched waveform data;

repeating the above steps for all of the test vectors in STIL, thereby forming a test vector file of the target test language;

wherein the step of comparing the template and the constituent event is made at different levels of abstraction determined in advance, in the order of a signal level, a wavekind level where the signal is configured by a plurality of wavekinds, and a character level where the wavekind is configured by a plurality of characters..